

Applicants: Ron S. Israeli et al.  
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**PENDING CLAIMS 100-105 and 113-126**

100. A nucleic acid probe which (a) is at least 15 nucleotides in length and (b) hybridizes specifically to a nucleic acid having a sequence set forth in SEQ ID No. 1.
101. A nucleic acid probe which (a) is at least 15 nucleotides in length and (b) hybridizes specifically to a nucleic acid having a sequence complementary to the DNA sequence set forth in SEQ ID No. 1.
102. The nucleic acid probe of claim 100 or 101, wherein the nucleic acid probe is DNA.
103. The nucleic acid probe of claim 100 or 101, wherein the nucleic acid probe is RNA.
104. The nucleic acid probe of claim 100 or 101, wherein the nucleic acid probe is labeled with a detectable marker.
105. The nucleic acid probe of claim 104, wherein the detectable marker is a radioactive label or fluorescent label.
113. An isolated nucleic acid which encodes an antigenic prostate specific membrane antigen polypeptide comprising consecutive amino acids, the sequence of which amino acids corresponds to the sequence of all or less than all of an outside region of prostate specific membrane antigen, the

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amino acid sequence of which outside region is set forth within SEQ ID NO:2 beginning with amino acid number 45 at the amino terminus, provided that the prostate specific membrane antigen polypeptide so encoded is characterized by antigenicity.

114. An isolated nucleic acid which encodes an antigenic prostate specific membrane antigen polypeptide consisting essentially of consecutive amino acids, the sequence of which corresponds to the sequence of all or less than all of an outside region of prostate specific membrane antigen, the amino acid sequence of which outside region is set forth within SEQ ID NO:2 beginning with amino acid number 45 at the amino terminus, which encoded prostate specific membrane antigen polypeptide is characterized by antigenicity and comprises each of the following sequences:

- (a) Asp-Glu-Leu-Lys-Ala-Glu (SEQ ID NO: 35);
- (b) Asn-Glu-Asp-Gly-Asn-Glu (SEQ ID NO: 36); and
- (c) Lys-Ser-Pro-Asp-Glu-Gly (SEQ ID NO: 37).

115. An isolated nucleic acid which encodes an antigenic prostate specific membrane antigen polypeptide consisting essentially of a fragment of prostate specific membrane antigen, which fragment has a sequence which is the same as the sequence of all or less than all of an antigenic outside region of prostate specific membrane antigen, the amino acid sequence of which outside region is included within SEQ ID NO:2 beginning with amino acid number 45 at the amino terminus, which encoded prostate specific

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membrane antigen fragment is characterized by antigenicity and comprises each of the following sequences:

- (a) Asp-Glu-Leu-Lys-Ala-Glu (SEQ ID NO: 35);
- (b) Asn-Glu-Asp-Gly-Asn-Glu (SEQ ID NO: 36); and
- (c) Lys-Ser-Pro-Asp-Glu-Gly (SEQ ID NO: 37).

116. An isolated nucleic acid having within its structure at least 15 consecutive nucleotides having a sequence which is present in the sequence set forth in SEQ ID NO:1 and encoding a fragment of prostate specific membrane antigen.
117. An isolated nucleic acid having within its structure at least 15 consecutive nucleotides having a sequence which is complementary to a sequence present in the sequence set forth in SEQ ID NO:1.
118. The isolated nucleic acid of claim 116, wherein the isolated nucleic acid encodes an antigenic domain of prostate specific membrane antigen.
119. The isolated nucleic acid of claim 116, wherein the fragment has a sequence which is the same as a sequence of all or less than all of an outside region of prostate specific membrane antigen, the amino acid sequence of which outside region is set forth within SEQ ID NO:2 beginning with amino acid number 45 at the amino terminus.
120. An isolated nucleic acid which encodes an antigenic fragment of prostate specific membrane antigen, which

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fragment is characterized by antigenicity and has a sequence which is the same as a sequence of all or less than all of an outside region of prostate specific membrane antigen, the amino acid sequence of which outside region is set forth within SEQ ID NO:2 beginning with amino acid number 45 at the amino terminus.

121. An isolated nucleic acid which is at least 15 nucleotides in length and specifically hybridizes to the nucleic acid of any one of claims 113-120.
122. A vector which comprises the isolated nucleic acid of any one of claims 113-120.
123. The vector of claim 122, wherein the vector is a plasmid.
124. A host vector system for the production of a polypeptide which comprises the vector of claim 122 and a suitable host cell.
125. The host vector system of claim 124, wherein the suitable host cell is a bacterial cell, insect cell, or mammalian cell.
126. A method of producing a polypeptide which comprises using the host vector system of claim 125 under suitable conditions permitting production of the polypeptide and recovering the polypeptide so produced.